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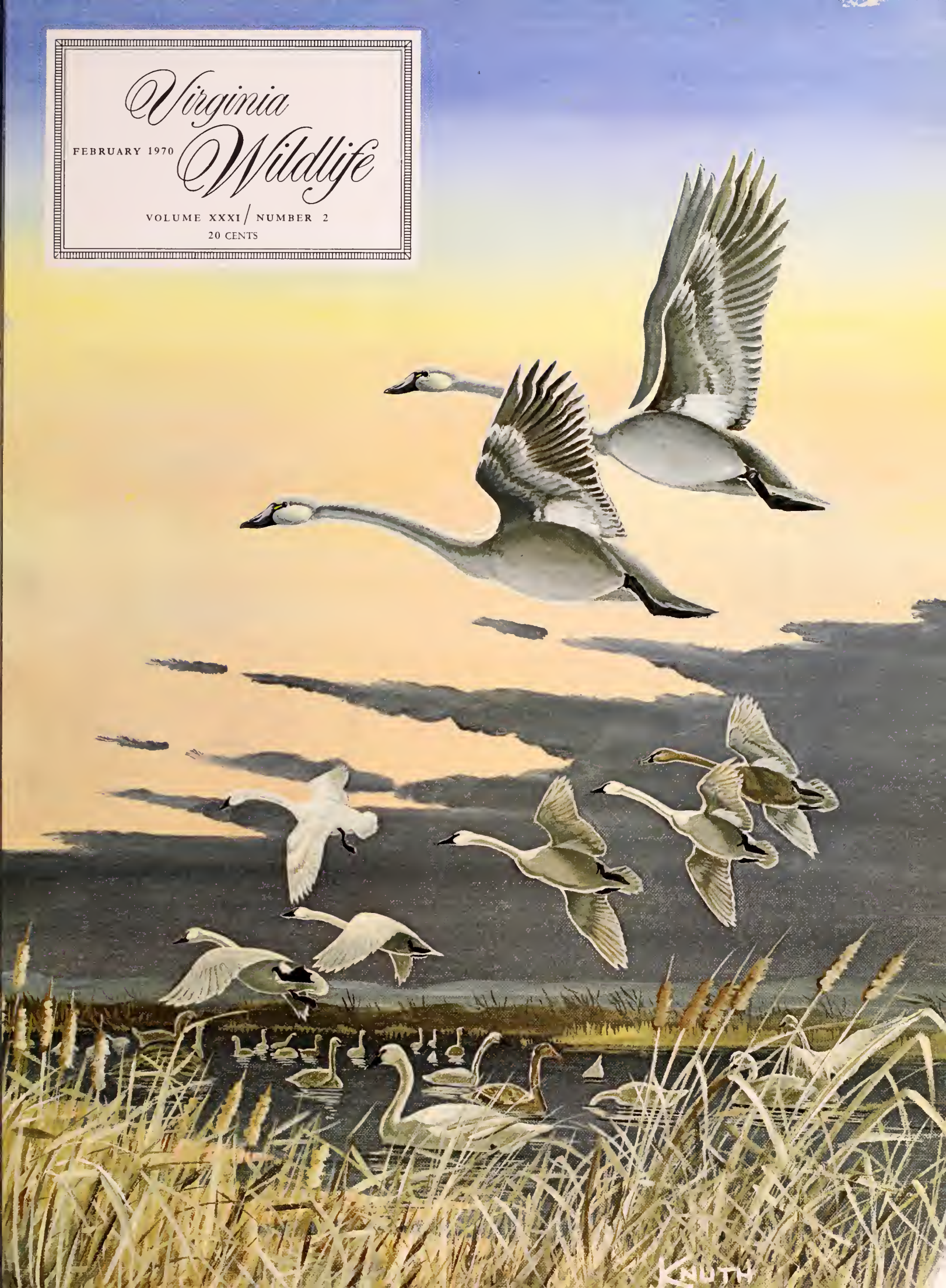

Virginia Wildlife

Dedicated to the Conservation of Virginia's Wildlife and Related Natural Resources and to the Betterment of Outdoor Recreation in Virginia

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COVER: The majestic whistling swan breeds mostly north of the Arctic Circle and winters on coastal waters of North Carolina, Virginia and Maryland. Chesapeake Bay, Back Bay and Currituck Sound are particularly to their liking. Our artist this month: Carl Knuth, Jr., Fond du Lac, Wisconsin.

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GUEST EDITORIAL

A British Look at American Hunting

By JOHN MADSON
Winchester-Western Div., Olin Corp.
East Alton, Illinois

IN 1968, an English wildlifer named W. A. Newlands spent three months in the United States surveying our game management programs and hunting methods.

His report was made recently in the bulletin of the Eley Game Advisory Station, and was a terse summary of the American wildlife scene. Newlands' main observations were:

1. The ideal of "free hunting" as established by American settlers is becoming unworkable in the 20th Century.
2. The American hunter expects free access to large tracts of land in exchange for a license fee. The essence of his sport must be "rugged." The average American takes delight in his equipment and techniques, and seems to have submerged his urge to kill a large bag limit under a warm feeling of "backwoodsmanship."
3. The American system of state-managed game is unrewarding for the man who wants to "put something back" on his own land. Since the man who maintains the game habitat fails to be rewarded, it is not surprising that farmers on good land make almost no effort to conserve game.
4. Total money spent on hunting is very high; the proportion spent on game management is very low.
5. The complexity of American game laws is astounding. Yet, the problems of North American wildlife populations emphasize that laws cannot enforce conservation; this has to be in the hearts of those who actually live on the land.

Will Newlands has a keen and penetrating eye; his points are well taken. But while his eye is sharp enough, there's something wrong with his perspective. He saw some very American things while he was here, but through eyes that were very English.

The basic difference between American and English hunting, of course, is that English game is owned by the landowner. In North America, game is public property. Newlands indicates that this is the great basic flaw in American game management, since landowners are not inclined to manage wildlife unless they are rewarded in money, special hunting privileges, or both. Yet, this is a flaw that we'll just have to live with, for the concept of privately owned game turns the average American hunter red, white and blue.

There are also deep differences between American and English hunting traditions. Our tradition was molded by many things, but the main ones are (1) a vast land area, (2) a great variety and abundance of game species, and (3) a concept of free hunting for every man. Add to these another factor, one that Newlands sensed as "backwoodsmanship." It's more than that; in our hunting we relive our national youth, and savor a measure of the richness and freedom that set us apart from all other people and all other times. In one sense, our act of hunting is a thanks-giving as unique to North America as the holiday of that name.

(Continued on page 22)

LETTERS

Wild Pigs?

PLEASE furnish me information concerning season dates, bag limits, license fees and best hunting areas for wild pigs, both feral swine and European wild boar, in your state.

D. H.
Florida

We have no wild boar in Virginia, and do not want any. No kind of pig is considered a "wild" animal in Virginia, and therefore any feral pig, unlike a game animal, probably would be considered the property of the owner of the land upon which it is found unless someone could prove otherwise with respect to that specific animal. In any event there are no hunting regulations applicable to pigs in Virginia.—Ed.

Pheasants?

HOW are pheasants surviving in Virginia? I would like to know when you think we may be able to hunt pheasants.

Gregory Carneal
Falmouth

Our game biologists are trying to develop a strain, several strains in fact, of pheasant which will be able to survive and reproduce successfully enough in Virginia to give us another game bird. It is to be hoped that such birds will be able to utilize some of the habitat which, because of man's present land use patterns, is no longer suitable for native species. It is a long process and the program is still in the experimental stages. Self-sustaining colonies of pheasants have been established in several areas, but general pheasant hunting throughout Virginia, if ever, will come in the still rather distant future. Any harvesting of the newly established populations in the near future is likely to be on a very restricted and experimental basis.—Ed.

Unwelcome Stork

IT is most gratifying to see that *Virginia Wildlife* is finally giving some attention to the population problem through publication of "The Unwelcome Stork," by Matthew C. Perry, in the December issue.

What especially needs to be emphasized is that the entire conservation movement is doomed to ultimate failure unless the human population is stabilized, or better still gradually reduced to a more ideal level, as advocated by Mr. Perry. Most of the eastern states, including Virginia, are already badly overpopulated, and it will not be long, at the present rate of increase, until hunting, fishing and outdoor pursuits in general have been blotted out by mushrooming human numbers.

To be effective, advocates of conservation should actively promote birth control and family planning. The public must be convinced that it is everyone's obligation to see that population is stabilized by the general adoption of the standard of two children to a family as an absolute maximum.

L. J. Hammack, Jr.
Lawrenceville

Wild Swans

By ALBERT G. SHIMMEL
West Decatur, Pennsylvania

I STAND in the cabin doorway and face the predawn darkness. Behind me blazing logs splash the walls with warmth and light. Outside the chill of yet unmelted ice is in the air. The upper arms of the lake are free, fed as they are by sandspring brooks. Below their confluence the main expanse still struggles to break the winter's shackles.

I see dark silhouettes of evergreen, etched against the sky. Spring is an expectancy, an intangible for which I search, an enigma that cannot be defined. Even as I turn, a faint wild call comes from the south. Quickly I turn and face the lake. I blink my eyes and finally catch their distant forms against the sky. They top the distant ridge. The swans are coming north! Nearer and nearer the wavering V approaches, matching its undulations with the slow majestic beating of their wings. Their guide, the quiet MYSTERY.

The sky is lighter now. Suddenly there comes another sound. A single brazen note is flung upward from the open water. The chin-strapped leader of a flock of resting geese shouts his reassuring call toward the weary flight. Here is a sanctuary.

The swans, responding to the welcome cry, swing wide then circle back. They set their wings and glide down. I watch them disappear behind the screen of trees. I hear the soft contented gabbling with which the geese make them welcome.

The first faint flush of pink is in the east. Suddenly it is dawn. I look toward the lake again. Water sparkles through the trees, like bits of broken mirror scattered here and there.

A flock of ducks flash by. Their wing spectrums catch the strengthening light. Excited quackings mingle with the whisper of their wings. They speed up the valley, then turn and race again toward the lake. Three are susies closely pursued by three green headed drakes. The mallards have come home again. This is their mating flight.

I make a hasty breakfast of crisp bacon curls, oatmeal porridge in which plump raisins add a spice. I sweeten it with brown sugar and top it with a cup of tea. This is not the tea of town but woodsman's tea, full bodied, black and strong with just a hint of mint.

The old stag shirt is hanging near the door. I slip it over my shoulders and am aware of the faint odor of wood smoke that clings to the wool. . . . Smoke of countless distant camps. . . . There is no time to reminisce. . . . Spring is an urgency that tugs me to the lake.

I pass the spring and see that sprigs of watercress are sending up new leaves. The silver maple buds are drops of blood. I stoop to pass under the drooping hemlock limb that shades the trail. I cross the foot log that bridges the water where the brook meets the swamp. I balance carefully. The water is too cold to take a bath. I see the water swirl among the tufts of grass. The pickerel have come up from

the lake to string their eggs among the sunken roots. . . .

I remember a summer morning when we pushed the boat, (this son of mine, man grown) among the lily rafts and water weeds. We cast pork chunks into the pockets and drew them back, in imitation of a swimming frog. We lured those lean jawed fighters clad in black, green and minted gold until we tired of the sport. We killed a brace and took them back to the cabin. The children were delighted. We shared them fresh from the fire, then hung the scraps on a decaying stump beyond the cabin window. We watched the black masked coon that came at dusk to pilfer them.

I need not watch the trail. I've passed this way so many times it is familiar to my feet. I stride along. My binoculars, hanging from the strap around my neck, tap my chest lightly with each step. Now I am aware of the sharp clean scent of pine. The needle-covered duff is soft and resilient under foot.

There is a scattering of balsams by the lake. I break a tip and bruise the needles between my thumb and finger. Spring is in their stickiness. I lift it to my nose and breathe its fragrance. . . . I remember distant campfires, north of the border. . . . The swans will soon be there. . . .

I pause, screened by the evergreens, and look for an opening through which I can watch the birds. The water is darked, stained by the swamp. The swans are great white blobs of floating foam.

I have two courses open now. Either I can try to hide and creep as close as possible or I can boldly show myself and trust they will not fly. If I remain hidden my field of observation will be limited. Stealth to any creature casts you in the role of the hunter. . . .

Not far away a bank of snow, blown in off the lake by winter winds, has turned to ice. It forms a a perfect path. I do not hesitate but walk out to the water's edge. This is the test. . . .

Again the leader lifts its voice. There is no fear but only caution. Every head is raised to study me. . . .

A piece of stranded drift is near. I seat myself to watch and wait. . . . Both geese and swans continue to watch me carefully. The minutes tick away. Far back on the ridge I hear the rolling thunder of a drumming grouse. Almost I am tempted to go look for him. . . . The adult swans feed near each other. The tension that has held the birds motionless is drained away. The adult's plumage is immaculate. The cygnets of the previous year are ashy-gray about the face and neck. They have not yet achieved the adult's snowy white. I chuckle as I look at them, remembering what my mother often said, "Boys, go wash and don't forget that you have ears and neck."

They begin to feed, warily at first and then unmindful of my presence. The swans feed out farther from the shore than the geese. Their longer necks allow them to feed in deeper water. They tip and point their tails toward the sky while they probe for pond weed, sprouting lily buds and eel grass. I time them and find that they can keep their heads submerged for at least two minutes. They maintain their upright position by stroking slowly with their great webbed feet, pushing at right angles to the position of their bodies. I watched a pair in adult plumage feed, followed by four others, their ashy heads marked them as last season's young. Perhaps this is a family group, parents and young. I can't be sure.

Always in each feeding group there is one bird on watch for possible danger. They feed in turn and watch in turn. I strive to discover the order of their pattern but give it up.

The geese feed closer to the shore. They cannot reach as deep as do the swans. They feed in flotillas of a dozen or more individuals. Their feet kick up a wake behind them as they swim. I notice that the ducks swim in and out among the swans and geese. Occasionally they snatch a bit of food directly from the larger bird, but generally they are content to feed on the scraps that are dislodged and float up from the other's work. I note that there are mallards, wood ducks, scaups, buffleheads and blacks.

My attention is drawn to some mallards that have occupied a tiny bay, not far from where I sit. Perhaps these are the birds that I observed at dawn. I watch their courting antics. The males swim around their susies in tiny circles. They bow and stretch their wings as if to show at best advantage the colors of their dress. Occasionally one of the drakes will stand upright in the water and beat his wings, making a great display, coaxing and pleading for attention. Suddenly a susie takes off without warning. A drake follows her. They fly down the lake, close to the water until they are out of sight. Soon a second pair are gone, flying down the lake. The two remaining ducks climb on the roots of an ancient stump. They preen their feathers and take the sun. . . .

I look back to the geese and swans. One swan has climbed to the top of a muskrat house and is resting there. Another finds a bit of floating greenery and pecks at it idly. The others are floating in the quiet waters of the cove. They drowse as the sun beats down upon them. The geese have gathered on the banks or in the quiet water where they, too, are resting with their heads lying along their backs between their wings. As ever there are one or two that stand on guard, scanning the land, the water and the sky.

A pair of ospreys, high overhead, swing into sight. The watchman shouts a warning cry and every head is raised. A swan stretches its head to the full length of its long neck. I hear a sound that I have never heard before, a single note, deep in the bass register, a single long drawn *Who-e-e-e-e*. Some how it has a foghorn quality . . . but arctic chill and sweeping winds and muskegs with the wisps of fog, curling up before the midnight sun, are in its sound. . . . They seem to recognize the osprey as a friend—at least the birds are quiet and resume the attitudes of rest.

An hour goes by and still another. The scene remains unchanged. Suddenly the swans flex their great wings. The seven foot span is impressive to the sight. They flock together. I hear thin, high-pitched pipings, then the flock begins to move. Slowly at first then rising to the surface they patter along the water until they are airborne. They circle once around the lake, then fall into place and turn toward the north. I watch them out of sight and something deep inside awakens in an urge to follow them.

I watch them until they are sparkling dots of silver against the blue. . . . Then, empty sky . . . .

I stand in the cabin door and feel the calm that comes from knowing all is well. The miracle of spring is here. . . . It was brought in on snowy wings. . . .

AFIELD IN FEBRUARY

By CARSTEN AHRENS
Pittsburgh

Photos by Leonard Lee Rue, III

ANTHONY and Douglas were waiting to hike with me at the end of Maple Avenue. Ahead of us was a ramble through white, wintery hills. Underfoot was powdery snow that crunched with crisp, mechanical sounds. The sky was intensely blue, a few cottony clouds floated about, the sun was brilliant, but the air was cold. At no time, even on the southern slopes of the game lands near town, was there a hint of thawing.

. . . suet in an onion sack . . .

As we passed Mr. Warner's birdfeeder, Doug called our attention to a feeding downy woodpecker; Tony determined its sex by observing only the male wore red on his cap. Suet on a day like this is frozen stiff, yet the bird loosened and swallowed considerable of the icy stuff. A mammal would probably have a time digesting such frigid diet. Birds, however, have high internal temperatures, twelve or more degrees higher than that of man. This causes the fat to melt more quickly, so they manage to eat suet without suffering indigestion. Birds, judged by man's temperature, would be said to "run a fever" all the time.

. . . nature's scavengers . . .

Through a screen of hemlocks, we watched a trio of deer evidently searching for apples under the snow in an

A pair of red foxes passed this way in the new snow.

orchard. Doug said the three frequently are under the trees so they probably find fallen fruit. This is the season when the bucks lose their antlers. Tony observed that he had found a shed antler that had been gnawed so thin by field mice, it broke into pieces when he picked it up. Rodents could secure calcium for their own bones in this way.

. . . mayhem at midnight . . .

In the pasture, Tony called our attention to signs of what must have been a suddenly terminated trip of a rabbit and a successful bunny-napping by a great horned owl. The rabbit's tracks across the long slope abruptly ended when out of the night on soundless wings the owl, a big one, struck. The tips of the bird's wings had punctuated the snow on either side of the messed up area giving a vivid impression of its size. The victim had been carried away to be devoured elsewhere; only a few drops of blood stained the snow, a feather, and a bit of fur remained . . . mute clues of a midnight murder.

A great horned owl picked off his prey and carried it elsewhere to devour it.

. . . wreaths in the snow . . .

In the same pasture land we found several dozen leafy rosettes that were flattened against the ground as though to protect their still green circle of leaves. They lie in dandelion fashion, forming almost perfectly round clusters that seem to huddle in the general stubble, absorbing the sunlight, and escaping the sharp winds. The cows have broken off the tall stalks of last summer so the boys were at a loss for a moment to recognize the rosettes. Of course, the woolly leaves of one and the prickly leaves of the other soon gave away their identities. They were the start of next summer common mullein and teasel. When warm weather returns, the foundations are there that will send up the stalks, and these rosettes, having played their part, will dry up and disappear.

. . . a time of famine . . .

As we followed a trail along Walnut Creek, Doug recalled that the Red Men referred to February as the "lean time" or the "time of the hunger moon." Indians dreaded this month because the food stored from autumn was greatly depleted, game was often scarce, and spring was still far away. Many of our mammals would echo these Indian sentiments if they could.

Life responds to cold weather in several ways. Trees become dormant. Most birds, some fish, and a very few insects and mammals migrate. Some, like invertebrates, amphibians, reptiles, a number of mammals, undergo hibernation—a deep sleep that ends only with the coming of warm weather. To many others, like the deer, there is no escape. They just have to endure the low temperatures along with deep snows, icy winds, and the struggle for nourishment that cold weather so often brings. Food is hard to come by. Fruit, berries, acorns, seeds of the summer before have been buried in snow and fallen leaves, or have already been eaten.

Cottontail rabbit tracks in February snow. One trail ended abruptly.

Doug observed that the tulip trees' flower cups had the seeds carefully picked out by the cardinals back in December.

. . . Marmota monax . . .

One short-legged mammal who knows nothing about the "hunger moon" is the groundhog or woodchuck. We came upon a number of entrances to their underground dens, sometimes out in the open field, and each of us recalled an item about a cow or horse that inadvertently stepped into an opening and broke a leg. But of all the mammals in winter woods, none is less bothered by February's cold than is the woodchuck.

All through the late summer and autumn, the chuck makes of himself a reddish-brown catch-all of all sorts of wild and cultivated vegetation. When winter begins, he is almost too fat to waddle along on his black feet, and he staggers down the tunnel into his den, shuts himself in, and hibernates. I came upon one last fall pulling newspapers into his sleeping quarters; he must have discovered that paper makes

good insulation. Once he has tucked himself in, he's snug and warm. Up in Alaska his cousins, the marmots, have an uninterrupted nap of eight months! Down here, many mammals, like the bear, the raccoon, or the chuck, will stir about should a warm day break the monotony of the cold.

. . . symbol of wisdom . . .

While this earthy member of the squirrel family is lost in sleep, February finds the owls getting their family affairs in order for the new year. Sometimes these nights sound troubled with the hooting of our big nocturnal birds of prey, the barred and the great horned owls. More often one hears the tremulous cry of the little gray or brown screech owl.

The great horned member is one of the earliest birds to begin nesting; eggs may be laid as early as January. Other owl species soon follow. I told Doug and Tony about the winter I watched the progress in the nest of a pair of barn owls in a cupola of an old barn. To say "nest" is certainly misleading for the white eggs were simply placed on a plank, and absolutely no attempt had been made to bring in twigs or nesting material of any kind. The weather was below freezing at each of my visits and one of the two owls was always incubating. Most birds don't begin incubating until all of the eggs are laid, but owls have to, or the eggs would freeze. Then, too, these barn owls' four eggs weren't laid in an ordinary succession. An irregular number of days elapsed between the placing of eggs one, two, three, and four. But since all were incubated continuously, the young birds were hatched, fed, and went right on growing, and by the time the last one left his eggshell, here was a strange looking quartette. The first born was so much bigger than the recently hatched newcomer. Tony observed that this would never happen in a pheasant's nest.

. . . winter's silence shattered . . .

Doug led us to a spot where, earlier in the winter, he had been startled by an explosion that seemed to come from a medium-sized elm. After the sharp report, bits of bark and wood floated down. How could it have occurred?

This is not an unusual happening. Sap in winter is withdrawn from the upright parts of trees and stored below frost levels in the roots. During warm spells the sap may rise again into the stem and branches. Occasionally it is caught up there by a cold snap and hasn't time to return. The water expands greatly as it chills; there is a report not unlike an exploding shell, and a limb or even the trunk of the tree may be split open. Sometimes bacterial infection or an insect infestation may gain a foothold here; more often, however, the wound will heal itself.

. . . made for skis, sleds, toboggans . . .

We had quite a discussion about the white stuff that grunted goodnaturedly each time we took a step. Snow has lots of relatives in the form of dew, fog, frost, glaze, graupel ("an opaque mass resembling soft hail that is composed of snow and water"), hail, ice, mist, rain, rime, and sleet. The entire family, alphabetized or otherwise, is made of H_2O, but varying atmospheric conditions transform prosaic water into some of the most amazing forms of crystals. They range from the most ephemeral frost patterns to solid ice.

But common, ordinary snow is truly a phenomenon. Snowflakes are believed to be formed from water vapor high above the earth. The flakes vary greatly in size. All are six-sided, but no one seems to have ever found two exactly alike. Mr. W. A. Bentley made over 4,000 photographs of snowflakes, and every flake had a pattern unlike any other.

We used to take black cloth on a clear, calm winter day and catch the first flakes to fall. That's the time to study the intricate forms that snow assumes. Later on when the snow comes down more thickly, or when the wind causes one flake to collide with another, their perfection is lost.

The heaviest snow in our country falls in the Far West. Californians get 400 inches in the Sierra Nevadas. Twice that amount may fall during a winter in the Mt. Rainier region of Washington. Here in the East we get only 5 to 100 inches.

Snow that lies deep for long periods of the winter is often regarded as beneficial. The run-off is more gradual than that of rain, and so the erosive effects are not so great. Snow is also a great insulator and prevents deep freezing

A buck and two does leave tell-tale trails. The buck tends to drag his feet. The does pick up theirs daintily.

of the soil. Crops like winter wheat profit by a blanket of snow for the upheaving effect that goes with freezing and thawing is absent.

Deep snows are costly items in time and cash to the users of railroads and highways. Thanksgiving of 1950 brought a general heavy snow over much of the eastern United States. It brought taffic to a complete standstill and many cities were actually snowbound for days while they slowly dug themselves out.

At such times, if one is old enough, he can recall the horse-drawn sleigh, the cutter, and the bobsled of bygone times, and if his imagination still works, he can conjure up the jingle of sleighbell sounds on the frosty air.

Foxy Reynard Is Fair Game For Absentee Hunter, The Trapper

Text and Photos by BILL WEEKES
Martinsville

THE trapper is an absentee hunter, nature's time-lapse predator. From November through January his game is the ravishing red and aggressive fox.

John Hundley of the Figsboro community, one of about 1,000 licensed trappers in the state, traps more or less as a hobby, although his native Henry County will give him $2 for each fox tail he brings in, while the going price for red and gray fox pelts has been running $5 and $3 respectively.

But Hundley, a 29-year-old trapping equipment dealer, also gets a kick out of the activity as a sport.

"I like to get out early in the morning. I think it's healthy. And it's fun to come up to my trap and see the fox waiting for me," he said.

John Hundley on the trap line.

The sport is knowing how to set a trap. The satisfaction is knowing you've set the trap right, knowing you've more than matched wits with your elusive prey.

"The fox is the most intelligent animal I trap," evaluated Hundley, who has been trapping one animal or another since he was ten. "I catch a fox easier than a mink, but the fox has a memory. A mink's habits are harder to detect, but if a fox pinches his toe on a trap and gets away, he'll remember not to try a trap with the same lure again that season. You'd have to catch him on a different lure."

There's a lot to setting a trap. Many times Hundley is frustrated. Traps spring without a catch. Frequently the catch is of an unwanted variety.

"I've caught everything from vultures to possum, rabbits and even wild dogs," said Hundley. "The dogs don't get hurt. They usually think they've become tied up and will lie down and wait to get freed."

The trap itself, died black from the wood of walnut and inscribed with the name and address of its owner, is about the size of a salad bowl. Untoothed jaws extend 5½ inches across. These metal jaws are released when the pan, or platform, about the size of a silver dollar, is stepped on by an animal. The jaws confine a fox in a tight grip on the small of the leg above the paw.

Before he does anything, the trapper must decide where to put his traps. He ought to know the area, the likely routes the restless fox will traverse. Reynard likes to travel the easy way, unhampered by underbrush. He moves along fence rows, field edges and dirt roads. These are the best spots to set traps.

The traps should be placed in such a manner as to encourage the approach to it from only one direction, the front. Many times Hundley placed his trap with the hole next to a log or stump, or with tiny seedlings flanking one side or the other to discourage approach from these angles.

First step in the actual trap setting is to dig a hole about eight inches deep at a 45 degree angle. Into the hole is squirted the lure—fox urine or gland liquid.

"Fox will steal from one another and think the hole is where another fox has buried his unwanted food," Hundley disclosed.

The angle of the hole must be right. If it slants too much, the fox will approach it crawling so he can see the bottom of the hole. Because of an inaccurately dug hole, many a fox is lost by the trapper. The jaws will snap on the fox's body fur and Reynard simply pulls off the trap while backing off.

The trap is buried in a shallow hole. A metal bar anchoring it is hammered deep into the ground. The trap is then covered with a thin coating of fresh dirt. Fresh dirt attracts creatures.

An experienced trapper like Hundley will make a slight depression with his trowel in the dirt over the pan.

"For some reason a fox will step on a depression and avoid a pebble or a tiny ridge of dirt," he observed.

Trapping can also not be fun, especially when you come upon one trap after another sprung fruitlessly, or not at all.

"You have to be very careful not to leave any of your scent, or you will drive away the fox," Hundley cautioned. He sets all traps with gloved hands. "You shouldn't even have rust on the trap. There should be no foreign scent at all."

"If you catch a possum or another "foreign" creature, you should also sprinkle the top of the trap with urine to confuse the fox.

"Otherwise he may, out of curiosity, start digging up the side of the trap to see where the strange scent is coming from and spring your trap," Hundley noted.

Also, to insure you have the hole the proper distance from the trap (about a foot) you should know what kind of fox you're going after—red or gray.

For a couple of weeks last November, Hundley trapped around the Bassett area, territory unfamiliar to him. After noticing the number of empty traps sprung, he concluded the "wrong" kind of fox inhabited the area. Hundley was trapping a wooded area and thought the smaller grays would

Hundley prepares a trap.

be running the traps. However, the reds will also run the open areas adjacent to the woods and could have sprung these traps. If this were the case, the traps would have been set too close to the holes to catch the longer-legged reds.

Gray fox are found closer to "civilization." The more elusive red fox is more shy of man and the human scent. Also, where red prefer cow fields and other open spaces, a gray can be trapped in wooded areas adjacent to underbrush and fallen trees.

"A red has to be able to see all around him," Hundley noted.

Frustration can manifest itself not only by having the "wrong" fox visit the trap area, but by having unsuitable weather gumming up the mechanics of operation.

Last November this writer accompanied Hundley on his rounds of checking 13 traps. The night before, Henry County had been hit by a cold snap that engendered the season's first snow. Until they get used to such cold, Reynard and his foxy friends cut down on night life considerably.

But the traps had to be checked. We walked up a dirt road to check a couple traps. Usually Hundley set all his traps within a radius of a mile or two.

Hundley knelt down at the first trap and discovered tracks covering the ground over it. But the trap had not been sprung. Just the day before Hundley had caught a red on this trap. A trap that has once caught a fox is twice as potent the next time around. In fact, Hundley recalled having caught a fox five straight nights on the same trap. Anyway, the fox could have jumped up and down on this trap this morning and not sprung it. The ground was frozen and would not give way. The next trap had sprung, but a

Red fox.

clumpy piece of frozen ground had wedged itself in the jaw hinge, leaving just enough of an opening to allow a fox to slip his leg out between the jaws.

"I don't trap fox when real cold weather comes because these kinds of things happen," Hundley said. "Some winter trappers carry their own dried out dirt with them to sprinkle over the pans. The dirt is packed in peat moss."

A trapper becomes a detective when he studies his mistakes or the reasons for his failures in the field. Nature

Trap site.

Frozen dirt may wedge in trap and keep it from closing.

leaves signs telling the trapper what had visited his trap and, perhaps, why the trap didn't catch the prey.

Black hairs mean a red fox had been there. The forelegs of the reds are black. Yellowish hairs depict a possum. Persimmon seeds in a dropping come from the gray, who is a vegetarian as well as a carnivore. A red's paw print is spread out like a dog's. A gray's print is smaller with more of the claw showing.

As long as the weather remained cold, Hundley's luck was nil. Then, a few days before Thanksgiving, we went to an area near the city reservoir outside Martinsville. We came to the last two traps. We were rather puzzled at the bad luck because the night before had not been particularly cold. Hundley figured cutting operations in the area had chased the fox elsewhere or put them into hiding. Maybe the dogs had chased them away.

Hundley stopped the truck and we piled out. We trudged up a dirt road not far from the clearing where the truck had been stopped. Hundley wore his wicker pack basket containing shovel, urine bottle and sifter. After 50 paces from the truck we saw HIM waiting for us—a big red male.

Reynard tried to make a dash for freedom, but his ensnared foot caused him to be jerked back. Hundley knocked out the red and stepped on his side, just behind the front legs. Hundley reset his trap and carried his fox to the truck. We got into the front and headed for the last trap.

"Well, I guess we'll have to get that gray now so we can have a picture of both red and gray," this writer said.

We were kidding, of course, but when Hundley got out and walked off a bit toward the last trap, he soon called back:

"Well, you've got your gray!"

The gray is smaller, a less-fox-more-cat looking creature. Its ears are more atop its head and the black areas are less in evidence. When Hundley tried to rap it, the gray aggressively snarled at him and tried to bite the shovel. The gray growled and bared its teeth.

"A gray will attack a trapper. I've had one grab hold of my boot. But a red will try to get away without a fight," Hundley confirmed. "If each fox acted differently, I'd say beware. He might be a sick fox (rabies)."

How successful has Hundley been as a part-time trapper? His highest yield was several years ago. Some 52 fox. Usually he picks up no more than four on 12 traps and many times he is "skunked." He estimates a successful part-time trapper of all species could make between $500 and $700 a season.

"The farmers are usually very cooperative and are willing to pay me a dollar for each fox I get, but I figure their letting me trap on their land is payment enough," Hundley said.

Fox hunters, however, don't cotton to trapping operations much. The hunters use the fox for a sport of their own—letting dogs loose on one and then listening to the dogs. The harmony is entertaining, or so they say.

Gray Fox.

HUNTERS' HOT STOVE TALES

By OZZIE WORLEY
Roanoke

VIRGINIA hunters had some experiences during the 1969-70 season that will hear telling and re-telling.

They were true, too.

Some of the incidents may be candidates for "Believe It Or Not"—like what happened to Henry H. Beckner of Route 2, Boones Mill.

Beckner, 46, bagged a 12-pound, 5-ounce gobbler with his shotgun. When he went to pick it up, his mouth flew open in amazement. Lying near the turkey was a grouse that he had killed with the same shot.

If you think that was unusual, take a gander at the accomplishment of Dave Bocock, who is a Roanoke city fireman. He felled a grouse with an arrow on Potts Mountain in Craig County.

Bocock was hunting with Bill Kinsey, also a member of the Roanoke Fire Department, and Kinsey's 17-year-old son, Gwynn.

Bocock's hagging the grouse was only one segment of the luck this trio enjoyed. Each of the hunters also bagged a turkey soon after they entered the woods. But they nailed them with shotguns.

It was about 7:30 in the morning. They spotted a gang of 20 turkeys feeding directly toward them. Each hunter picked out a bird, and they pressed their triggers almost simultaneously.

Three turkeys dropped. The remainder of the startled flock took to the air.

On the opening day of the deer season, Darrel Ray Terrey of Blacksburg had a quick decision to make. While he was in quest of deer, he spotted a bobcat stalking a turkey.

Terrey had two choices. He could either bag the predator, which isn't edible, or rob it of its potential breakfast and probably come up with a meal of his own. He settled on the latter alternative.

His action resulted in a 12-pound gobbler for the table. When Terrey fired, the surprised and suddenly not-so-hungry bobcat fled.

And how about the venison-lover who cleaned out Roland R. Morgan, a Roanoke County hunter?

On the last day of the deer season, November 29, in counties west of the Blue Ridge, Morgan bagged a spike buck in Botetourt County. It weighed about 100 pounds.

Since it was late when Morgan reached home, he hung the deer on a tree in his yard and planned to finish dressing it the next day. But when he went for it the next morning, it had been stolen.

Another hunter was grumbling that you run into some real greenhorns while seeking deer. He claims that he encountered the amateur to beat them all.

The veteran hunter had scored on a nine-point buck, and was dragging it from the woods. He soon was joined by another hunter, obviously a newcomer to the sport. Gawking at the buck, whose rack was rather prominent, he asked: "Boy that's a beauty; is it a buck or doe?"

By the shores of Gitchee Gumee,
By the shining big sea water,
Stood the wigwam of Nokomis,
Daughter of the moon, Nokomis,

Why this sudden burst from Longfellow's "Hiawatha"? It's the story, remember, of the little Indian who learned all about nature—the squirrels, the deer, and so on.

The reason for mentioning the poem is this: When the deer season opened in Bath County, Hiawatha bagged a fine buck. Only this was a Hiawatha from Roanoke—Hiawatha Lambert, to be precise. Lambert's a carpenter by trade.

Although he got a five-point buck, he didn't accomplish it in storied Indian fashion. He used a rifle. And that's really his name—Hiawatha Lambert.

Another hunter, Larry Huffman, became involved with claim-jumpers while he was deer hunting. His mother operates a general store on Johns Creek in Craig County, near where he was hunting.

Huffman reported that he bagged a ten-point buck in a field a few miles from the store. When he dashed into the field to claim the deer, four other men arrived at the same time. They contended they'd shot the buck.

A witness, a boy who was hunting with Huffman, backed up Huffman's version. The boy said that the four strangers were sitting in their camper near the field when Huffman shot the buck.

An argument broke out at the scene of the kill over the rightful owner. The well-armed four strangers wound up with it.

The nearest big game checking station was at the store of Huffman's mother. But the four men who had claimed the deer did not check it there—for rather obvious reasons.

And, friends of Paul Bain have given him a new nickname, "Lucky." It fits—or else he is one of the best rifle shots to come down the pike in a long time. Here's why:

One Saturday afternoon, Bain wanted to go hunting but had to finish some chores at his Roanoke County home before he could leave. He did not arrive in the woods until about 3:30.

A few minutes after he had left his car, he sounded off with his turkey-caller. Close by he received an answer.

He walked in the direction of the clucking and spied a turkey's head bobbing up and down as it walked through underbrush. It was about 30 or 40 yards from him.

"I was really hoping to spot a deer," Bain said afterwards, "and had my 30-30 rifle with me."

Not wanting to tear up the turkey, he aimed at its head. He pulled the trigger and missed.

The turkey zoomed into the air and Bain threw his rifle to his shoulder again and fired. The bird fluttered to the ground almost at his feet.

Bain had neatly shot off its head while it was about 100 feet in the air. It was a hen weighing 9 pounds, 13 ounces.

Finally, young Gary Johnson of Christiansburg had a sharp answer for why he shot a relatively small turkey when perhaps he could've bagged a larger one.

As it was, Gary got an 8¼-pound hen. "There were some bigger ones in the gang, which I think had just come off the roost," he said.

He was asked why he had not aimed at some of the bigger turkeys.

"If you've never got one before," he answered, "this was not a little one. I shot at the one closest to me."

VIRGINIA WILDLIFE ☆ ☆ ☆ ☆

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

SIKA HUNTERS DRAW BLANK. Archers failed to bag a single sika deer during the special bow and arrow season on the Chincoteague National Wildlife Refuge on Virginia's Eastern Shore. The majority of the refuge on Assateague Island was open to the bow hunters from October 15 through November 15, the longest hunting period yet approved for the area.

Another departure from previous hunts was the granting of season permits allowing the archers to come and go during prescribed hunting hours without checking in and out. A total of 49 of these season permits were issued with some of the hunters spending a week or more stalking the wary oriental deer.

13,606 DEER BAGGED WEST OF MOUNTAINS. Big game tag returns show Virginia hunters bagged 13,606 deer west of the Blue Ridge, a marked increase over the 10,804 taken in that section last season. Counties in the central mountains produced extremely well, with the kill in several setting all-time records. Bath County led the region with a total of 1962 deer, up some 418 over last year's total. Rockingham was close behind with a total of 1595 deer reported. The kill in Augusta County was also up, totaling 1245 animals. All-time record kills were also reported from Highland and Rockbridge Counties.

HUNTING AND FISHING LICENSE SALES INCREASE. Both hunting and fishing license sales jumped about 6% last year. Figures certified by the Commission to the U. S. Fish and Wildlife Service were 397,139 paid hunting license holders and 439,398 paid fishing license holders during the 1968-69 fiscal year. The number of license holders is derived by means of a formula which takes into account the fact that a person may purchase more than one license. This count, along with the geographic area of the state, determines the amount of federal aid funds Virginia receives. Last year, these funds provided $680,756 for various fish and game projects in the state.

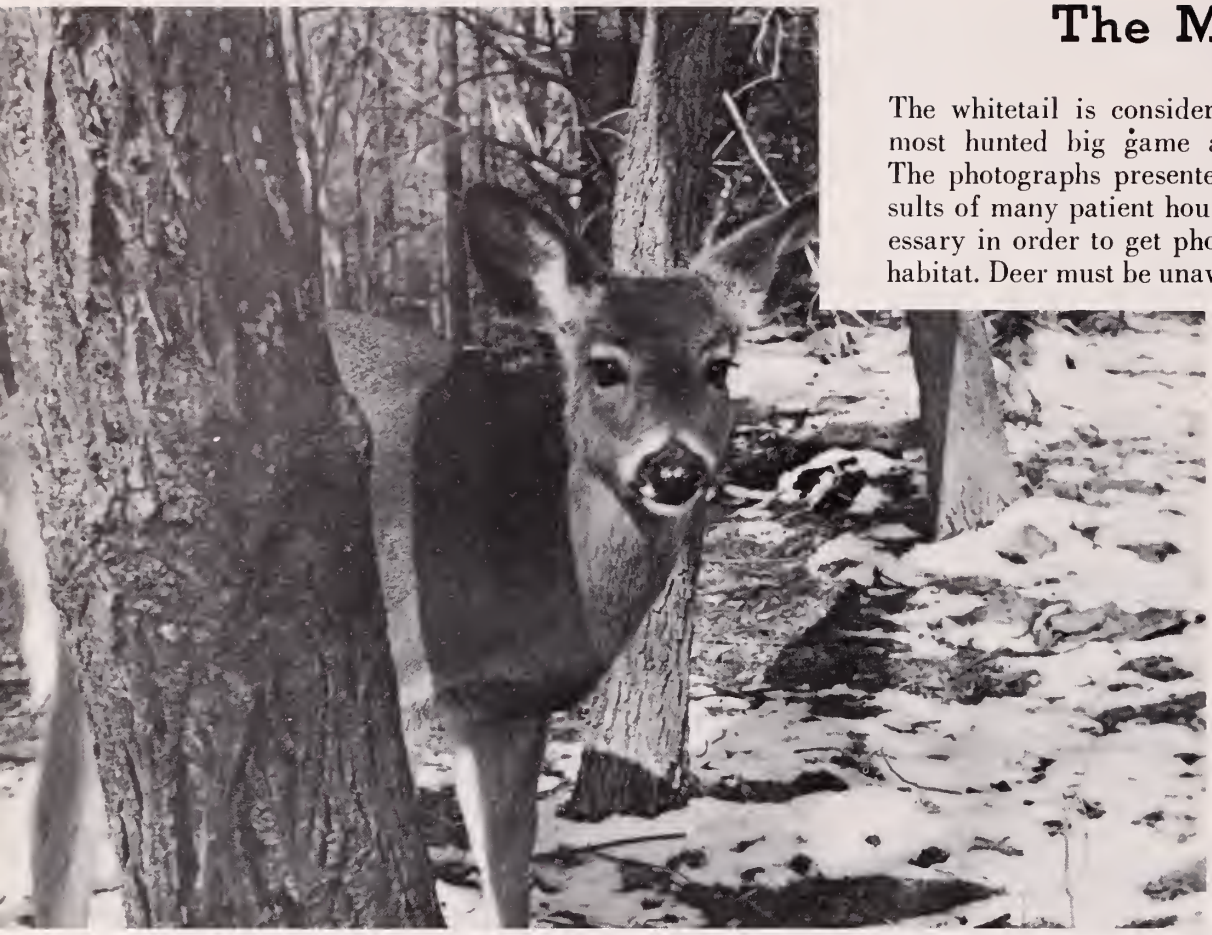
Actual sales of resident hunting licenses totaled 273,917 for the year, up some 7% over the previous year's total. Fishing license sales to residents climbed to 267,080, an 8% increase. Trout license sales totaled 100,800, a 7% increase while National Forest Stamp sales soared to 161,739, a whopping 19% increase. A slight increase was noted in the 213,717 big game licenses sold. Except for the several sources of federal aid which are tapped for various projects and timber sales on Commission lands, income from the sale of hunting and fishing licenses is the Game Commission's only source of revenue.

DOVE SUCCESS SPOTTY IN EARLY SEASON. Dove hunter success varied from excellent to poor on public dove areas during the first part of Virginia's split dove season, according to Game Commission hunter surveys on the respective areas. The Commission's Elm Hill Wildlife Area at Kerr Dam had the best record, with 179 hunters bagging 1,507 doves for an average of 8.4 birds per hunter. The James River Area also had a high average of 7.4 birds per hunter, but this represented information from only 10 hunters. Birds per hunter averages on other areas included 3.8 on the White Oak Mountain Area, 2.8 at Hawfield, 1.9 at Camp Pickett, 1.6 on the Amelia Area, 0.71 on the Powhatan Area and 0.3 on the Weston Area. The Hawfield Area had the largest number of hunters, with 570 participating in the Wednesday and Saturday afternoon gunning. The Weston Area was also heavily used, with 396 hunters reported.

Commission biologists report that 75% of the birds were bagged during the first week of the season on most of these areas. One theory is that early concentration of birds found little grain cut in Virginia's rain drenched piedmont and moved rapidly south where the season was more advanced.

The Many Moods of

The whitetail is considered the most beautiful and most hunted big game animal in North America. The photographs presented here are some of the results of many patient hours of stalking, which is necessary in order to get photos of deer in their natural habitat. Deer must be unaware of intruders!



Above: Anterless buck displays beautiful markings of the whitetail. The mood: serenity and freedom. Below: Although it is not mating season, a buck in the velvet looks majestically at a passing doe.

A doe and fawn fora

Above: Doe fawn, panting and terrified, approached photographer; she was being chased by a pack of dogs. Below: Two small bucks show friendship by licking each other's face.

ne Virginia Whitetail

By CHARLES R. LEWIS
Winchester

Many of us hunters today have only one chance to see the whitetail and that's at gun point. Here is a small portion of the everyday life of the Virginia whitetail.

Bedded yearling leisurely regurgitates and chews food gathered the night before.

Above: A wary buck that had just caught a danger scent. In a moment he had disappeared. Below: The small bucks that were licking each other (at left) now begin a friendly skirmish.

Above: A spike buck cautiously walks down a well used trail. Below: A doe tries to make out an unknown sound, which turned out to be made by another deer approaching.

Understanding the Mourning Dove

By CALVIN A. DEVINEY
Miami

L.L. Rue III photo

HUNTING is thought by many people to be the major cause of mourning dove mortality. True, when all the factors which cause death among the mourning doves are broken down to their respective positions hunting is perhaps a major factor. But when total mortality is considered, hunting is of relatively minor importance.

Over the United States many thousands of doves have been banded and the returns from these bands indicate that about four percent of the birds are killed by hunters. If we double this figure to include those birds which are not reported and those birds which are shot but are not recovered, we still have a figure of less than ten percent of the dove population.

If we calculate the annual mortality of the population at sixty percent, which is indeed a conservative figure, we find that hunting accounts for slightly more than fifteen percent of the total annual mourning dove mortality.

When we lay the facts on the table we see that hunting seasons are not the primary controlling factors for mourning dove populations. Undoubtedly the dove numbers today are much higher than they were prior to the European settlers' appearance on the scene. This is because man has changed the land, and these changes have been beneficial to the mourning dove. They have resulted in increased nesting habitat, better distribution of water, and larger weed patches and more cereal grains.

Indications are that the upward trend for nesting habitat, water, and food will continue, which means that mourning dove populations should also continue to rise.

It would be interesting to census the hunting public to determine the favorite upland game bird in the United States. There would probably be as many suggestions as there are species of game birds. Each hunter has his own preference. Yet when viewed in terms of total kill, no species draws as much attention as does the mourning dove.

Each year approximately twenty million of these birds are harvested in the states which permit dove hunting. Recently, the mourning dove harvest has surpassed the total waterfowl kill, and that of the beloved quail.

The mourning dove is migratory and its status is defined by the Migratory Bird Treaty Act of 1918. Primary responsibility for dove management is placed with the United States Fish and Wildlife Service. However, a program which involves an important bird population of nationwide importance, must of necessity be comprehensive enough to cover all phases of both management and research.

Annual population trend data must be gathered. New management techniques must be developed. Studies must be conducted which will furnish further knowledge of habitat requirements. The structure of dove populations must be examined. Past research must be analyzed. And, there must be law enforcement.

All of this adds up to a pretty large job and the United States Fish and Wildlife Service has neither the personnel nor the funds to handle it all by themselves. Thus, there is cooperation from outside sources. State Game Department personnel, students and staff members of universities and colleges, wildlife organizations, and private citizens are all a part of this cooperative effort.

Through the years various mourning dove studies have been conducted. We now know quite a bit about the general life history of the bird. We know how to determine year after year changes in the breeding population, and we know some of the general effects which hunting has upon the population.

But, with the increase in hunter pressure, we must learn to manage the mourning dove more efficiently. In some cases management recommendations may have to be broken down to smaller areas. Seasons may have to be adjusted to provide the greatest benefit to the most hunters. Habitat will have to be managed to provide the greatest possible mourning dove production.

What, specifically, are some of the things which we have learned, and how do we use them in dove management?

The basic mourning dove breeding population trend is derived from standardized census routes. Each of these routes is twenty miles in length. In establishing them throughout each state, an attempt is made to sample the various types of dove habitat.

The counts are conducted during late May and early June when the breeding season is at its peak. The cooing doves are counted at road stations one mile apart and the number

of doves heard over the entire length of the route is recorded. Presently, there are over eight hundred of these routes located throughout the United States and all of the states in the union participate in the program.

Information obtained from these routes is submitted to the United States Fish and Wildlife Service for analysis. Current information is compared with data from previous years and is considered when the seasons and bag limits are set. At the present time, workers are attempting to refine the call count method so that breeding population changes may be determined with an even greater degree of accuracy.

During the hunting season many states collect harvest information. Doves are aged so that age ratios may be determined. This can furnish a clue to the success of the breeding season. A high percentage of young in the bag signifies a satisfactory breeding season.

Hunter success also serves as an indicator of breeding success. Age ratios and hunter success also help us to ascertain the effects which various seasonal and climatic factors have upon the hunting season. These factors affect migration and with this knowledge the optimum dates for dove seasons can be selected.

Furthermore, the hunting season furnishes an opportunity to conduct special studies from which new techniques and procedures will evolve. These studies also contribute data for evaluation of the effects of hunting seasons upon dove populations.

Some of the most interesting and productive portions of the dove management program are the banding studies. Almost everyone exhibits interest when they recover a banded bird. Where and when was it banded? How far did it travel? How old is it? These are but a few of the questions that the banding studies can answer.

Through the years, several hundred thousand mourning doves have been banded in the United States. Bandings on a scale such as this provide information which the game biologist can utilize in his formulating management plans.

Banding information has supplied the basis for the establishment of the three mourning dove management units. These are the eastern, central and western units. They bring the same concept into mourning dove management that the flyways did to waterfowl management.

Through the analysis of band returns it was found that there was a definite pattern to dove migration. Doves produced in one state are harvested in either that state or in other states in that migration unit. Only a few of the doves produced within a given unit are shot outside of that unit.

This concept allows us to consider more or less homogeneous populations with less variance in abundance and migratory movements. This, of course, does much to simplify the management of a nationwide, migratory population. In the future, we will perhaps be able to consider individual populations within a unit.

Banding has also revealed that, in most cases, doves produced within a state tend to furnish the bulk of dove hunting for that state. But hunters need not fret about losing doves to another state or states. Most of the doves which leave a state will not under any circumstances return the following spring.

From banding it has also been possible to determine the average life span of the mourning dove. This, in turn, gives us a picture of what the biologists term "population turnover." Population turnover is defined as the length of time required for one segment of the population to be eliminated from that population.

The birds produced during a given breeding season are followed until they have disappeared, or practically disappeared, from the population.

Banding studies have shown that most of the mourning doves hatched in a given year have died by the time of the next breeding season.

The studies have also shown that a breeding population is composed primarily of individuals that were hatched in the previous year. In other words, the doves that were hatched in 1968 have already suffered heavy losses but they will comprise the body of the 1969 breeders and they will be practically gone by the time of the 1970 breeding season.

This gives us a population turnover of approximately two years. This is not a very long time but it is true of most species of small birds. Many of the small mammals, such as mice, have an even shorter population turnover.

Analyzing band returns still further we find that, in relation to total mortality, hunting takes only a small portion of the birds. Only about fifteen percent of the total annual loss can be attributed to hunting. A comparable total mortality is experienced by other birds, such as the robin, which are not subjected to hunting.

This fact gives us a clue of hunting in the control of bird populations. Hunting merely takes a portion of the birds and an equivalent number would be naturally removed if there were no hunting.

It is not intended to imply that hunting under certain circumstances could not excessively reduce a mourning dove population. However, by the time that our hunting public has increased to the point where it could endanger the doves, research will have given us the knowledge and techniques to more closely evaluate dove numbers, and control the harvest.

Now let us summarize some of the findings from the banding studies. First, dove migration is confined within more or less definite units. Second, doves produced within a state tend to be harvested within the same state. Third, dove mortality is high, and normal population turnover occurs in about two years. Fourth, hunting merely absorbs some of the natural losses. These things we know. Present and future studies will give us this information in more detail.

There have been studies, and there will be more studies, designed to learn more about the habitat requirements of mourning doves. The carrying capacity of the land determines how many doves will survive from one year to the next. By carrying capacity we mean, the number of doves that are able to survive during a given season of the year on a certain area of land.

In some states, the carrying capacity for doves is high during the summer when food and water are available. During the winter, when food may be covered with snow, the carrying capacity is practically zero.

We know that influences which man has exerted upon the land have brought about increases in mourning dove populations. In many respects we know how this was accomplished.

The increase in weeds and cereal grains has swelled the food supplies. Water developments have opened new areas to nesting. Tree and shrub planting have enhanced nesting possibilities. These things are obvious.

But, as the human population increases, there will be a corresponding increase in hunter pressure. Consequently, extension of our knowledge concerning habitat requirements and the affects of regulating the harvest will help us manage and utilize the mourning dove more efficiently.

WOMEN ON PHOTO SAFARI

Photos by Earl Dibble

CAMERAS cocked and portable tape equipment set to "record," 20 dedicated American women plan to leave the United States late in February, on an educational and humanitarian venture into East Africa. Of fundamental concern to the group is decimation of wildlife in the countries to be visited; they expect both to learn and to prepare themselves to teach of the vital need for increased conservation efforts.

It's one important phase of an over-all campaign of the FRIENDS OF AFRICA in AMERICA, organized by former builder-developer-sportsman Clement E. Merowit, whose travels over the past decade have made him increasingly aware of the ecological and social problems in Kenya, Tanzania and Uganda. It uses the acronym "W A R N" (Women Against Ravishment of Nature) to spell out its goal—that of halting slaughter of the dwindling numbers of wildlife.

Diana, the huntress, Queen of Beasts, will be among the many big game animals whose photographs the members of the WARN safari will bring back.

"Fifty years ago, uncountable millions of wild animals wheeled about freely throughout the grasslands of East Africa. Since then, savaged by hunters and pushed out by cattle raisers, 90 percent of the wildlife has been destroyed. The rest are now protected by stringent law in national parks, but relentless poaching is killing off even this remnant."

"That's what it says on page 58 of the *LIFE World Library* book, TROPICAL AFRICA," Mr. Merowit said recently. And he added: "The threat to African wildlife, intensified by women's fashions, requires more than firmer legal measures. The critical situation persuades thoughtful women to launch an educational campaign generating moral sanctions against adornment with trophies of endangered species. The overriding question is whether another 5,000 leopard skin coats on American shoulders, which scientists say could wipe out this feline, is morally defensible."

How does a handful of women, embarked on a photographic African safari, plan to influence leaders of the fashion world? Each of them, plus the few men who may be selected to accompany them, will assemble an audio-visual record of the research trip, to be used as the basis for conservation lectures and conferences after return to the United States. They expect that their message, dramatically portrayed in this way, will command the attention of community leaders, of legislators, and of fashion dictators.

On their three-week safari, the women will visit a total of nine game parks in Tanzania, the new republic formed when Tanganyika and the island of Zanzibar joined forces in 1964, in Uganda and in Kenya. All three are astride the equator, with Kenya and Tanzania strung along the curving coastline of the Indian Ocean and Uganda, inland, tucked into the pocket formed by their boundaries. It's an area of startling topographical variety, including immense plateaus and the towering volcanic peaks of Mount Kilimanjaro in Tanzania, the coastal plains and hills and the highlands of Kenya, and the miles of open water and swampland of Uganda, which make up almost 1/5 its total area, and include the famed Lakes Victoria, Albert and Edward.

In the conservation areas, such as the 4,450 square miles of the Serengenti National Park, the Ngorongoro Caldera (or Crater) and the Murchison Falls National Park, a great many different animals will be spotted and photographed. There are elephant, giraffe, zebra, black and white rhinoceros, hippopotamus, buffalo, lion, leopard, cheetah, hyena, antelope (including impala, gazelle and wildebeest), lizards, chameleons, crocodile, gorilla, baboon, chimpanzee and over 1,000 varieties of birds.

This group is to travel by car, mini-bus or Land Rover,

Curious giraffes will be found in the game parks visited during the three-week safari.

adapted so the most may be made of photographic opportunities. At each location they will be briefed by game and park officials and, in most instances, they will be housed at the game reserves. These are usually tiny bungalows; in one park the guest houses are built circular, in native fashion, with thatched roofs.

However, the expedition will not be entirely "in the bush." It is to advance true inter-cultural exchange, Mr. Merowit emphasized, and the Americans will have many opportunities to see and learn to understand the East Africans, their background and their future. Perhaps even more important will be the time spent in several of the larger cities, meeting with university and government officials.

In Kampala, chief native capital and commercial center of Uganda, in broad-avenued Nairobi, capital of Kenya and in Dar es Salaam, capital and teeming seaport of Tanzania, the women will be able to evaluate their own efforts and to explore a continuing exchange of ideas. East Africa University has a college in each of the countries to be visited, and it is professors from those institutions, as well as men from government bureaus, who will give assistance to the group.

Much of the machinery for gathering interested people together in East Africa has been set in motion, and concerned conservationists, both there and in this country, have pledged their support. Jomo Kenyatta, President of Kenya, has said, "We invite other nations and lovers of nature throughout the world to assist us in honoring this solemn pledge (to preserve the wildlife for posterity)," and Julius K. Nyerere, President of Tanzania, has declared, "The survival of our wildlife is a matter of grave concern to all of us in Africa. . . . We look to other nations to cooperate in this important task."

Price tag to each individual on the safari is $1,765.00 (tax deductible if the educational aims of the project are completed), with that figure covering virtually every contingency. It's a completely non-profit enterprise. Included are transportation (tourist class, jet), lodging, most meals, national park fees, tipping. Training and guidance in preparation of their audio-visual records, which Mr. Merowit designates "Sonides," are included, as well as conduct of the overall conservation campaign.

Who signs up for such an undertaking? Committed are women from all over the country, of all ages and with all kinds of backgrounds. Two housewives, one from Colorado and another from Florida, already have established their own, miniature conservation programs, nursing injured birds and animals back to health in their own homes. Both have frequently spoken publicly on the need for more active conservation measures, and the lady from Colorado, who has previously traveled in East Africa, is eager to study the area in depth.

Another in the group, a taxonomy (the classification of animals and plants according to their natural relationships) specialist in the Department of Agriculture, is both a dedicated scientist and researcher, an artist, and an accomplished linquist. Among the many languages in which she is fluent is Swahili, that hybrid, mainly Bantu, with an infusion of Arabic, that has become the trading communication of eastern and central Africa.

Still others in the group are teachers, writers, retired college professors. There are some openings available, Mr. Merowit noted, prime requisites for acceptance being a knowledge of at least elementary photography and a real commitment to the philosophies of W A R N.

Philanthropist Merowit, who took leave from a successful career in home construction to carry out his humanitarian ideas, will lead and supervise the safari. In addition to expertise with camera and recording equipment, he has written numerous articles for conservation magazines and general interest publications. He has spent as much as nine months on one of his trips to the area. The itinerary, carefully prepared by him, will take the group to such spots as a hidden valley where leopards are likely to be photographed.

"I'm tremendously enthused about this program," Mr. Merowit said in a recent interview, "and in all its promise

Where the Nile explodes through a rocky cleft to form Murchison Falls.

for the future. These women will be able to do a great deal toward saving that priceless heritage in East Africa.

"We've received rewarding moral support for our mission from many different areas," he continued. Mrs. Yarborough, wife of the Texas Senator, has observed that, 'by participating in W A R N, women can exert an ever-expanding influence in saving a part of the world's natural abundance,' and conservationist Margaret Owings has said, 'I'm behind you with every cell of my body'."

United Nations personnel, alerted to the undertaking, have been interested, particularly in its relationship to International Education Year, which takes place during 1970. A communication from UNESCO stated in part:

"Private individuals, preparing themselves, abroad, for educational endeavor at community level, at home, has broad implications for increasing understanding between peoples, and this, after all, is a primary objective of UNESCO. Our interest is heightened, incidentally, by our concern for conservation of the wildlife, which, while located in Africa, is a cultural heritage of the world at large."

A second W A R N mission consisting of about 20 students (ages 16-22) has been planned for next summer with a departure date in late July.

Headquarters for W A R N and for the FRIENDS of AFRICA in AMERICA are at 330 South Broadway, Tarrytown, New York. Chairman for the latter's International Advisory Board is Sir Julian Huxley, biologist and writer, who was appointed, in 1960, as adviser to UNESCO on wildlife conservation in East Africa.

Terrible Tyto

By MATTHEW C. PERRY
Graduate Fellow
Virginia Cooperative Wildlife Research Unit
Blacksburg

"WE'RE getting a WHAT?" My wife's alarmed cry over the telephone told me she wasn't exactly overjoyed at the prospect of a feathered addition to our menagerie. We had recently given an obnoxious pet crow away, but still had a time consuming sparrow hawk. However, being a graduate student in wildlife management and a fanatic about birds of prey, I could not resist the offer of a young bird.*

Fumbling with haste, I dialed the number my professor had scribbled on a small piece of paper. I asked the man that answered if he was "temporarily housing" an owl in his garage. He assured me that he was and that the bird was a "monkey-face" owl. I knew this odd-looking bird was a barn owl which belongs to a different family than other owls in this country. He said the bird looked hungry, but it would not eat a dead blue jay he had offered it. I told him I was raising over 100 white mice in my basement and that I would be able to feed it. I'm sure my raising mice shocked him—just as it periodically shocks my wife. Why would anyone raise mice in a basement?

When I arrived at his house in Christiansburg I assured him that I'd had some experience raising birds of prey and had a trained sparrow hawk. This explained the mice, but the fact that I had 100 of them was still a problem since their rapid population growth was outstripping the balance in the artificial predator-prey relationship. The owl could certainly help keep the mouse population in check.

The owl had flown into the man's back yard, but apparently had not the desire or strength to leave. Another young barn owl, found by another man in the same area on the same day, was dead when it was delivered to the Virginia Tech ornithologist. We could only surmise that the mother had been killed or driven from her nest and the young were prematurely on their own. The young bird, still covered with down, would have been easy prey for a neighborhood cat or dog. I hesitantly picked up the foot-tall owl and placed it in a box. I drove home full of anticipation of raising my new pet.

My wife and I immediately tried to feed the emaciated ball of down by placing a live mouse in front of him on the basement floor. We stood back and watched in disbelief as the mouse ran between the owl's feet. It got absolutely no response from the owl. We were amazed and could only imgine that this lack of response was caused by our presence

Tyto does balancing act on gloved hand.

*Editor's note: Birds of prey are protected by law and may not be kept in captivity without a permit. (Mr. Perry has one.)

The young barn owl did not know how to cope with a live mouse at first.

or the owl's inexperience. We left the owl alone with the mouse, but after not eating for at least 24 hours we knew we would have to force feed him.

My first lesson came when I picked up the owl by placing both hands around its closed wings. As the owl sunk its huge talons into my shirt, narrowly missing my stomach, I realized I had made a mistake. After removing his talons from my shirt, I held the owl with one gloved hand around his legs and the other around his head forcing his mouth open. With obvious displeasure, my wife forced quarter sections of mice down his throat with tweezers. It wasn't a pleasant task, and, much to my wife's joy after three days of forced feeding, the owl began on his own to snatch pieces of mouse from the tweezers. We felt relieved and confident now that the owl would live.

The first few weeks with the owl were enjoyable. I named him Tyto after his generic name *Tyto alba*, and fitted him with a leather jess or leg strap so I could handle him more easily. I prefer calling some pets by their generic names if possible as this is a good way to learn the generic name. My wife, however, persisted in calling him Hoover "because his hissing sounds like a vacuum cleaner!" Each day I would remove him from his cage and, holding the jess between the fingers of my gloved hand, would feed him. Although I read of one young barn owl that had gulped nine mice in rapid succession, Tyto's maximum was only three, eaten whole. Sometimes three mouse tails would stick out of his closed mouth at the same time. After feeding I would let him fly in the basement or I would walk around the basement with him on my fist.

As Tyto regained his strength, however, he became very dangerous and obviously unsatisfied with his state of captivity. One evening as I reached into the cage for him he jumped at my face. I slapped him away with my other hand and then grabbed him by the wing. As I floundered around half in and half out of the cage trying to grab his jess he made a deathly scream that terrified me. The only sound he had made previous to this was a hissing sound as he shook his head in warning. I finally calmed him down, fed him, and returned him to his cage. His passion to rearrange my face, however, convinced me that it was time to release him.

We had kept the owl throughout the summer and had enjoyed his mannerisms, but it was now time to say goodbye to Tyto. I stopped handling him each day, and instead would feed him with live mice placed in the cage. Unlike my falcon, which struck live mice with incredible speed, the owl would remain on his perch for a minute or two watching the mouse before striking. Sometimes I would turn the light off and wait in total darkness for the owl, which can locate mice by hearing alone, to strike his prey. Without making a sound with its large wings, which were now fully fledged, the owl would strike with amazing accuracy.

Convinced that Tyto could fend for himself we took him to the middle of a large pasture one evening in early September to release him. After removing the jess we tossed him into the air. He flew to a small clump of locust trees, but was soon noticed by several mockingbirds. Their screams of alarm and harassment soon attracted more mockingbirds. As the sun set, however, the birds retreated and then Tyto had the darkness in his favor. We left him still in the tree and the next day when I returned there was not a sign of him. Tyto was most likely in some secure hiding place in the woods waiting for darkness when he would again commence his unrelenting war on mice.

The first few weeks with Tyto were enjoyable, but as he grew and regained his strength he became dangerous to handle.

WHICKER HUNT

By HUGH M. GRAVITT, JR.
Virgilina

IT was a cool crisp night as I drove down the winding dusty road that led to Uncle Walter's tobacco farm in southern piedmont Virginia. The road was covered with a carpet of reddish brown leaves which indicated that winter was just around the corner. I had decided to visit my bachelor uncle who would most likely have some interesting tales about the past growing season. Almost every year the "ole" mule would be stung by some type of insect and run away while hooked to a tobacco slide full of leaves. With his tail curled up in the air, he would usually head directly to the stable or barn with tobacco leaves strewn every inch of the way—if they lasted that long.

After discussing the crops, Uncle Walter wanted to know if I would like to go Whicker Hunting. With a somewhat puzzled look on my face, I told him that this was a new kind of hunting for me but I was ready to give it a try.

Armed with only a flashlight and a paper bag, we started down the rutted wagon path to a tobacco barn. As we walked along Uncle Walter explained that the whicker was a very colorful bird that roosted in barns when the weather started turning cold in the late fall. With a sly grin he recalled the good old days when a group of young boys would sometimes carry their dates Whicker Hunting. Even though they didn't catch very many whickers when their dates went along, it was a whole lot of fun.

On approaching the barn he told me to be very quiet so that the whicker would not be awakened and fly away. Very slowly we opened the old gray weathered barn door and cut on our flashlight. Flashing the light around the barn being careful not to kick a tobacco curing pipe, we spotted a whicker sitting up in the gable end of the barn just below a small round hole in a plank. While Uncle Walter held the flashlight, I started climbing up the dusty logs of the barn. Each step was made slowly and carefully to keep from disturbing the whicker, which was still asleep. As I stepped up on the upper log of the old barn, it groaned like a hibernating bear which awakened the whicker. Raising his head and blinking his eyes very rapidly from the bright light, he seemed puzzled as to what to do next. Before he could decide, however, I grabbed him with one hand and instantly he let out with a cry that could be heard a country mile. Quickly, I slipped him in a small bag and started easing down the side of the barn for one slip on those dusty old barn logs could result in a very bad fall.

After I had reached the ground, Uncle Walter told me to ease my hand in the bag and take the bird out so that we could get a better look at him. Disregarding all of the whicker's protest about his predicament, I took him out of the bag and to my surprise it was a yellow-shafted flicker. Immediately I asked Uncle Walter how the flicker had acquired the name of whicker. His only guess was that it was similar to the flicker's voice. Sometimes while drumming "loud and persistent" with its bill against hollow limbs and other objects, it cries a rapidly repeated *whicker-whicker-whicker* along with many other calls and whistles.

The flicker is a very plentiful bird in Virginia and has probably awakened many of us in the early morning with his pecking on the gable end or roof of the house. These birds are found in woods and orchards, in shady suburbs, and along roadsides. They do much of their feeding on the ground. They eat ants more than anything else from old tree stumps and logs, but they also take other insects and a variety of wild berries and fruit.

The best field marks are the brown back and, in flight, the very conspicuous white patch on the rump. The underlings of the wings and tail are golden yellow with black polka dots. Both sexes have a black crescent on the breast and a red crescent on the back of the head. The flicker that we had just caught was a male for he also had a black mustache.

When Uncle Walter and I had finished looking at this very colorful bird, we placed him on the side of the barn and closed the door much to his satisfaction. Hopefully, this "ole" flicker would get some sleep before sunrise the next morning and come back to this tobacco barn, for I had thoroughly enjoyed my first experience at Whicker Hunting.

Guest Editorial (Continued from page 3)

All of this is wholly alien to European concepts of hunting. So is the fact that any honest American can so easily obtain, keep and use a shotgun or rifle. In Europe the rich man has the best hunting (and often the only hunting); in North America the rich *may* have the best hunting, but don't count on it. The American who has the best hunting is the man who devotes much time, effort and affection to his sport, and that may or may not involve much money.

But of all things that distinguish American hunting, none is more unique than our system of game management. Nowhere else are hunting seasons and bag limits so carefully adjusted to game species by trained game managers and biologists, and enforced by a trained corps of state and federal officers. Nowhere else does the land yield such per capita harvest of game—and yield it to men in all stations of society.

Such a system would never work in Europe and it has many shortcomings here, as our friend Will Newlands pointed out. But for all this system's flaws, we are certain that North America will be the world's last great bastion of wildlife, and man's last great hunting grounds.

The Groundhog That Came to Dinner

By JOYCE FITCHETT RUSSELL
Kilmarnock

Leonard Rue photo

"NOW what is Mabeline stalking?" I always keep a wary eye out for my neighbor's Persian cat. But this lumbering creature was not skulking: He stood up to inspect the tractor mower in the driveway. I dropped my sandwich and grabbed my field glasses. Somewhere I had seen an animal like that one. From over the hill I could hear another lawn mower: Had someone disturbed a muskrat in the pond there? A quick check in a source book ruled out the creature being either a beaver or a muskrat, but identified it as a woodchuck or groundhog.

Meanwhile, the roly-poly fellow tried unsuccessfully to crawl under a shrub, then meandered past the neighbor's flower bed, across the road and into our culvert. Out the other end he came, wandering down beside our fence until he came to the house next door. He looked in the front door, then checked on the back door and on the storage house. He seemed familiar with civilization and I wondered if he had been a pet or if he were sick. He returned to the safety of the culvert and I decided to leave him in peace.

Shortly afterward, however, a group of neighborhood children discovered him and promptly adopted him. They offered him bits of food but learned he preferred flowers. The lady in whose yard he had first appeared had an abundance of prize cannas and marigolds; she must have been puzzled at her garden's sudden decline.

A deliveryman chanced by one afternoon while several of us were watching him eat and told us he was raising one, too. He fed his pet toadstools and guessed ours was about two months old. He would like to have another, he hinted, but we discouraged him.

Although the little fellow seemed trusting, he retreated into the tunnel at loud noises or sudden movement. My son's arrival on the scene apparently brought him new courage, for he came quickly over, smelling and scrambling over his shoes and even allowing his head to be scratched. We were certain he had had human attachments.

Still, the possibility of rabies was not to be overlooked; therefore, I called the game warden. There had been no cases for a long time, I learned, but someone in the area had been raising a groundhog that had to be freed.

In a small town, one can soon discover details; in this case the identity of the "foster parents." Seeing the young woman soon, I learned the whole story of the groundhog they called "Charley." Inherited from friends in town, he had the run of their home, even to imitating the cat's habit of drinking water from the toilet. On the unlikely diet of dogfood, he had enjoyed wrestling with their dog but had resented visiting canines. She had worried that this familiarity might prove his undoing when freed. Inevitably, she received a severe bite that became infected and forced their decision to release the groundhog. Calls to wildlife sanctuaries and zoos brought no enthusiastic response, and they sadly left the door to his cage open. He returned the next morning for a tomato, and then she had seen him no more. She was relieved that he had been safe for half the two-week period they had figured it would take him to adjust to a wild life.

Charley moved soon to a larger culvert further from our homes, as he grew more independent and less disposed toward human company. I saw him grazing several times and I am certain he found the corn field closeby.

We hope he will hibernate and then in the spring bring his mate and babies to the field so that we may know all is well.

Edited by HARRY GILLAM

Coon Club Has Successful Show

Beecher Perry, Game Warden in Smyth County, and Dean Testerman, president of the Stoney Battery Coon Hunters Club, stand beside the array of trophies presented at the club's annual bench show and night hunt held in October. Hunters came from five states to participate in the water races, treeing contest and the night hunt. The funds are used to purchase raccoons for restocking.

Gabrielson Honored by Lab Dedication

Commission photo by Satterlee

One of Virginia's more famous citizens, Ira N. Gabrielson, was honored by having the new building housing the Migratory Bird Populations Station at the Patuxent Wildlife Research Center named the Ira N. Gabrielson Laboratory during ceremonies in October. Gabrielson, now president of the Wildlife Management Institute, was primarily responsible for the founding of the center during his 11 year tenure as Chief of the Bureau of Biological Survey and Director of that organization's successor, the U. S. Fish and Wildlife Service. Undersecretary of the Interior Russell E. Train unveiled the bronze plaque with a bust of the famous conservationist and the caption, "Biologist, Conservationist, Administrator" and dates of his government service.

Gabrielson is author of four books, co-author of three others, and is active as chairman of the Northern Virginia Regional Park Authority, vice-chairman of the Outdoor Recreation Commission, president of the World Wildlife Fund, and chairman of the Citizens Committee on Natural Resources. The Migratory Bird Populations Station keeps track of banding records on all types of birds and correlates this information to shed light on migration and bird population trends.

Beware of Rare Bear, Hunters Advised

A Roanoke doctor has advised the Virginia Commission of Game and Inland Fisheries that bear hunters, their families and friends should be warned that bear meat, like pork, should not be eaten unless well cooked, and for the same purposes.

"Next to swine, wild bears are the largest reservoir of *Trichinella spiralis*, and bear meat thus is an important source for human infestation of the parasite producing trichinosis," said Doctor John A. Martin in commenting upon a recently published magazine article on cooking bear.

Most of the cases of trichinosis in humans are mild, according to Doctor Martin, but fatalities do occur, particularly when the parasite encysts in certain parts of the brain.

The trichinosis parasite is acquired by eating the flesh of infected animals, and may be carried by other regular or occasional meat-eating species as well as by swine and bear. Thorough cooking destroys the disease producing organism and makes meat in which it may occur safe to eat.

"Bear meat can be safely eaten, but it should be given the same kind of treatment as pork," advised Doctor Martin.

State Bowhunters Number 20,663

Results of the latest Game Commission mail survey indicate that 20,663 persons hunted with bow and arrow during the 1968-69 hunting season. Statistically, the figure may be off 10% one way or the other, but it helps pin down the size of a group previously only guessed at in Virginia since archers hunt with regular licenses.

Survey forms were sent to about 6,000 Virginia hunting license buyers, about 65% of whom responded. Southwest Virginia claimed the greatest concentration of bowhunters with 7,084, followed by the northwest where 4,897 were tallied. A total of 2,631 was estimated for the northern piedmont and 4,167 for the southern piedmont. Bowhunting interest seemed lowest in the tidewater area, where 1,270 were estimated for the northern portion and only 621 for that area south of the James.

The question asked on the questionnaire was, "Did you hunt with bow and arrow during the 1968-69 season?" so casual as well as dedicated bow and arrow fans were included in the totals.

Westmoreland Lake Joins Public Waters

Chandler's Mill Pond, a 75 acre impoundment near Montross on State Route 3, has been added to the state's public waters by means of an agreement between the Commission of Game and Inland Fisheries and the surrounding landowners. The dam was severely damaged by Hurricane Camille as she dumped her torrential downpours on northern Virginia. In exchange for the public fishing rights, the Commission agreed to pay the landowner's share of the cost of the restoration in cooperation with the Virginia Department of Highways.

The fishing agreement covers only the lake waters since most of the shoreline is privately owned. The American Legion operates a concession on the lake where boats and bait may be obtained. The lake has been repaired and will be restocked in the spring.

Edited by ANN PILCHER

Study Hunter Safety

Miller Studio photos, Covington

Some 230 boys from Covington and Alleghany County High Schools participated in a special Hunter Safety Course sponsored by the Covington-Alleghany chapter of the Izaak Walton League of America (conducted under the direction of Waltonians Wallace H. Clark, Sr., and Norman Dew), in cooperation with the Virginia Game Commission and the National Rifle Association. Game Wardens Don Miller, John Heslep, F. W. Hanks and Don Wirt assisted. ACHS students taking the course are shown in picture at left, while those from Covington High School are in the right photo.

Tazewell Teens Explore Safety Rules

Tazewell High School ninth graders studying the fundamentals of safe hunting early in October were instructed by Game Commission Safety Officer J. N. Kerrick. From the essays of a few of those students—Debi Surber, Dale Roberts, Bobby Lee Jones, Clara Rhodes, Debbie Lambert, Jay Ziegler and Hyter Davis—come these thoughts on "Commandments of Hunting Safety":

Never climb a tree or fence or jump a ditch with a loaded gun; never pull a gun toward you by the muzzle. Climb a tree after unloading the gun, strapping it to your back, muzzle pointing away from your body. When with a partner, let him hold both guns while you are climbing. Before jumping a ditch with a gun, break the gun down and remove ammunition. An alternative: lay the weapon on the other side of the ditch before jumping. "Never pull a gun to you by the muzzle; if loaded, it might blow you to pieces."

Store guns and ammunition separately, beyond the reach of children. Young children will curiously fool with guns and in the process could be fatally wounded if you absent-mindedly put guns and shells together. A good idea would be to lock guns in a rack and store shells separately.

Watch that muzzle. Keep the safety switch *on* until ready to shoot; never point a gun at anyone, only at something you mean to kill. When you carry a gun keep the barrel or muzzle up, so it won't be pointing at anyone or anything you don't want to shoot.

Be sure of your target. Make sure you're shooting at a deer or a rabbit instead of your hunting partner. Wear brightly colored clothes that can be seen through the trees or brush.

What could be the results of having consumed alcoholic beverages then going hunting?—blurred eyesight, impaired or exaggerated sense of hearing, unsteadiness on feet causing a fall which may trigger an accidental discharge of the weapon. A gun is dangerous in the hands of those who do not have the proper respect for it. An intoxicated person may not be able to show this respect; thus a gun in his hands could be like "poison in a baby's."

Beginner's Luck

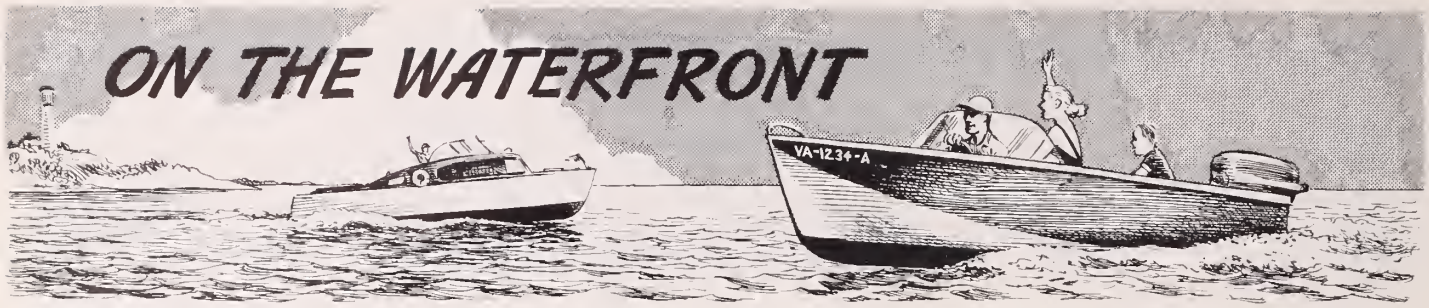
Steve E. Horsman, 16, of Springfield, with the 125 pound spike buck he killed in Spotsylvania County on his first deer hunt.

Chesterfield Team Effort

Concentrated effort in the field of hunter safety was made in late October and early November by wardens J. R. Bellamy, J. J. Westbrook, R. L. Griffith, and M. O. Wilkinson, Jr. They shared teaching duties in presenting the Game Commission-NRA course to 615 7th, 8th, and 9th graders at Elkhardt Intermediate School, 40 Scouts at Ramsey Methodist Church, and 84 Grange Hall High boys and girls. Chesterfield Ruritan members purchased instructional materials for the Elkhardt students, and at Grange Hall coach Jerry Harding joined Warden Patrol Leader Bellamy as instructor.

"Law Men" Teach

Last October in five Northern Neck counties from King George down to Lancaster 790 boys and girls (mostly 8th graders), representing 7 schools, received hunting safety instruction. Game wardens (from left) H. H. Pittman, Jr., Otis C. Crowther, Frank Settle and Donald Zepp, along with State Trooper H. J. "Jack" Boles (center), presented different phases of the course.



Edited by JIM KERRICK

Special Notice

The Commander, 5th Coast Guard District, Portsmouth, Virginia, has issued the following special notice to all operators of watercraft pertaining to vessels unnecessarily requiring the opening of a drawbridge.

"A vessel shall not require the opening of the drawbridge when such opening is needed only to provide additional clearance for appurtenances unessential to navigation of the vessel, or for appurtenances essential to navigation but which may be altered by hinging, telescoping, collapsing or otherwise, so as to require no greater clearance than the highest fixed and essentially unalterable point of the vessel.

"Appurtenances unessential to navigation shall include but not be limited to fishing outriggers, radio antennae which are or can reasonably be made flexible or collapsible, television antennae, false stacks, and masts purely for ornamental purposes. Appurtenances unessential to navigation shall not include radar antennae, flying bridges, sailboat masts, piledriver leads, spur frames or hydraulic dredges, drilling derricks, derrick superstructures and/or buildings, drilling cranes, or construction vessels, or other items of permanent and fixed equipment clearly necessary to the intended use of the vessel."

Further information may be obtained by contacting the Commander, 5th Coast Guard District, Federal Building, 431 Crawford Street, Portsmouth, Virginia 23705, or by calling Portsmouth 393-9611.

Proper Storage Protects Boat, Adds to Good Performance

Are you one of those people whose idea of storing a boat for the winter months is to park it in the back yard and forget about it until next spring? If you are, you are risking damage to your boat.

Proper boat storage is necessary for good performance. Unless the hull is given proper support it can develop a "hook," a concave distortion usually near the stern of the boat. If this happens, you have two alternatives: Sell the boat or learn to live with it. The latter is not always easy. Distortions have been known to cut performance, handling and riding comfort by 50 percent.

You don't have to go to great expense to store your boat properly. Your trailer will work well if the rollers are adjusted properly. Check this by consulting your owner's manual. Before using any other method, talk to your marine dealer. You might find out it's cheaper and safer to have him store your rig. Hull distortions also occur when gear is stored inside the boat, so avoid this.

Routine Maintenance

Before storing your boat it's smart to perform routine maintenance. It should be thoroughly cleaned, inside and out. Ordinary kitchen detergents will take care of most dirt and grime. Marine growths on the hull should be cleaned immediately. If allowed to dry, a job of scrubbing will turn into one of scraping.

All steering cables and pulleys should be checked and, if necessary, cleaned of any corrosion. The same is true for electrical wiring. If permanent fuel tanks are installed, inspect and clean the entire system. Remove the drain plug and bilge pump.

Storing Boat

The experts disagree about the best place to store your boat—inside or outside. A lot depends on the boat. Aluminum and fiberglass hulls are better off in enclosed storage. Wood hulls, which have a tendency to dry out and cause the planks to shrink, are better off outside where normal moisture protects them.

If you select outside storage, make sure the boat is covered with a protective tarpaulin. Provisions should also be made to allow any snow or rain to drain off the covering.

A few words of caution about your trailer are also in order. Now's a good time to re-pack wheel bearings and inspect seals. The winch cable, wiring, brake and directional lights should also be inspected.

The best way to protect trailer tires from deterioration is to block up the trailer. The tires should be touching the ground slightly because this seems to offer the best protection.

File Boat Plan on Long Cruise

Pilots are not allowed to fly planes without filing a flight plan. Boat skippers may well take a tip from this regulation.

It is a good idea to file a plan of your boat trip, if for any distance, with some responsible person ashore. This is the marine equivalent of an aircraft flight plan. It is a record of where you intend to cruise so that if you should have any trouble, rescuers will be aided in searching for you. Ask a U. S. Coast Guard Auxiliary unit officer. He will tell you how and where to file a plan.

Pleasure Boating Big Business

It is estimated that 43,230,000 persons participated in recreational boating during 1968, an increase of 4,230,000 over the previous 10 years. Total number of recreational boats in existence in 1968 was estimated to be 8,440,000, an increase of 640,000 over 1959. Forty-three percent of the outboards purchased during 1968 were 14′7″ to 16′6″ with an average length of 15′9″.

Pleasure boaters spent $3,292,000,000 in 1968 for new and used boats, motors, accessories, safety equipment, fuel, insurance, docking, maintenance, launching, storage and club membership. That year there were 5,900 marinas, boat yards and yacht clubs with waterfront stations in the United States.

The seventies will have a greater growth than the sixties. The median income has been rising and it is predicted to reach $18,000 by the end of the seventies. In 1958 the number of tax returns in the $20,000 to $100,000 bracket was 726,386. In 1967 the number was 2,218,744.

Bird of the Month:

By DR. J. J. MURRAY
Lexington

Gannet

LAST month's bird, the winter wren, is about as small a bird as we have. This month we go to the other extreme and consider one of our largest birds, the gannet.

In past years the scientific name of this bird has had several different forms. The great Linnaeus in 1758 called it *Pelecanus bassanus*. The Fifth (1957) Edition of The American Ornithologists' Union's *Check-List of North American Birds*, called it *Morus bassanus*, while Roger Tory Peterson in the 1947 edition of his *A Field Guide to the Birds* gives it as *Moris bassana*. In all these years, however, the common name has not changed. In 1758 Linnaeus called it gannet, as we do today. As is often the case, the common, or English name, shows more steadiness.

Whatever it is called, the gannet is a great bird. It has a wingspread of around 72 inches. Birds of any species vary in wing length as we humans do in height. In length individual gannets vary from 33 to 40 inches. The bill is four inches or more in length.

Young gannets in the first winter are very different in color from adults. These young are dark brown above, the feathers with small white spots. The adult is white, with large black wing tips. There is a queer plumage in birds changing from immature to adult plumage. At this stage the birds are marked like adults, except that between the black tips and across the back the plumage is mottled black and white.

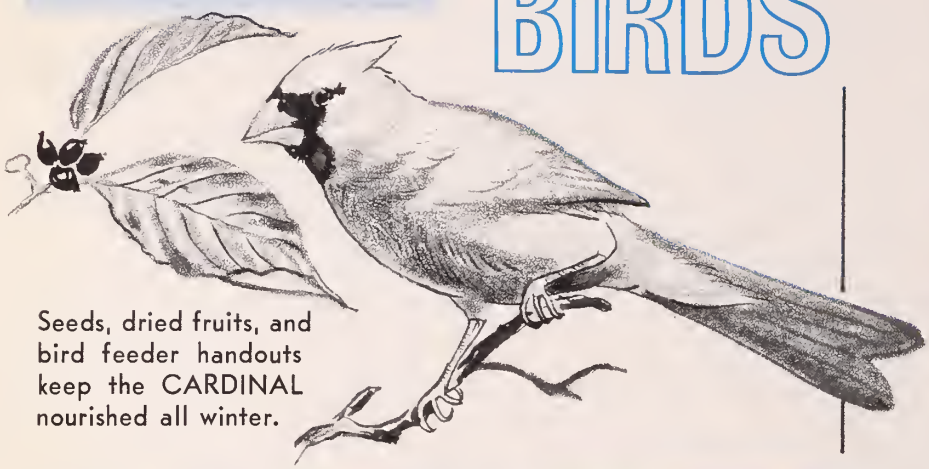
The gannet is a common winter visitor along the Virginia coast. As a transient in November and March it is even more common. Mrs. A. C. Reed, who did so much good work in the Norfolk area, saw over 600 gannets along the coast there on April 11, 1940, and over 1000 on March 27, 1948. So far as I know, June and September are the only months when it is not seen on our coast. To be sure, an occasional bird might appear then.

This bird is a powerful diver. Flying at a height of fifty to a hundred feet above the water, and sighting a fish, it plunges out of sight, usually coming up with its prey.

Gannets nest on both sides of the Atlantic. Their chosen nesting places are rocky cliffs over the water, where they will not easily be disturbed. A famous nesting place is the cliff called Bird Rock in the Gulf of St. Lawrence, where on the cliffs the breeding birds mass in great numbers. It is because of the safety of this nesting site that one egg to the nest will keep the numbers of the species in good shape.

WINTER is for the BIRDS

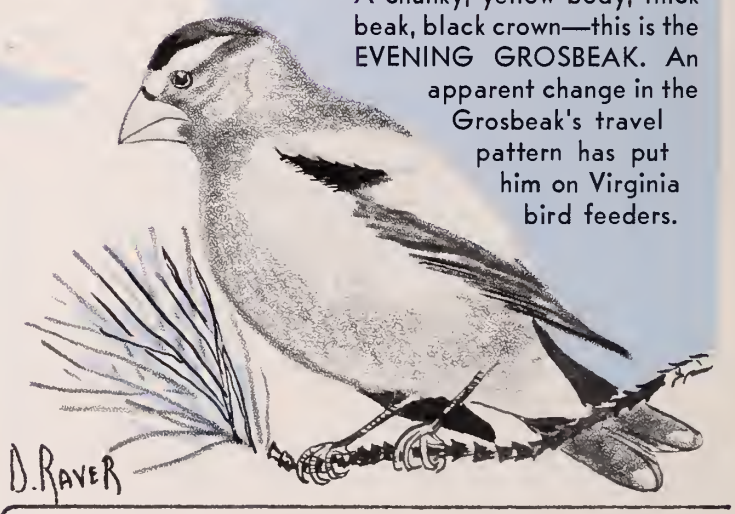
More birds in winter than summer? Probably not, but against the snow, and among the leafless trees, they are more easily seen. Here are but a few of the many that visit us or stay during the colder months.



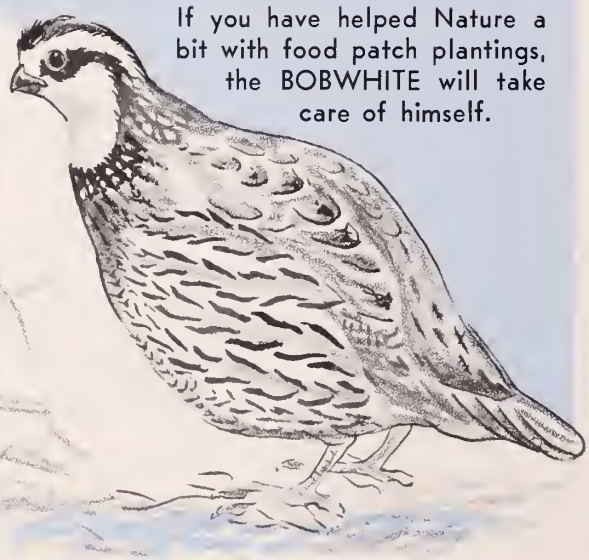
Seeds, dried fruits, and bird feeder handouts keep the CARDINAL nourished all winter.

A rare and beautiful sight in wintertime Virginia, the ghostly SNOWY OWL may be driven south in search of food.

The slate-gray JUNCO seems to be everywhere after a light snow. It is often called "snow bird."



A chunky, yellow body, thick beak, black crown—this is the EVENING GROSBEAK. An apparent change in the Grosbeak's travel pattern has put him on Virginia bird feeders.



If you have helped Nature a bit with food patch plantings, the BOBWHITE will take care of himself.

The RUFOUS-SIDED TOWHEE scratches out a living along the edges of winter woods.